

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>		1. CONTRACT ID CODE	PAGE OF PAGES 1 14
2. AMENDMENT/MODIFICATION NO. 0052	3. EFFECTIVE DATE See Block 16C	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. (If applicable)
6. ISSUED BY U.S. Department of Energy ORNL Site Office P.O. Box 2008 Oak Ridge TN 37831	CODE 00516	7. ADMINISTERED BY (If other than Item 6)	CODE
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) OAK RIDGE ASSOCIATED UNIVERSITIES, INCORPORATED Attn: Matt Albert P.O. BOX 117 OAK RIDGE TN 37831		(x) 9A. AMENDMENT OF SOLICITATION NO.	9B. DATED (SEE ITEM 11)
CODE 041152224	FACILITY CODE	x 10A. MODIFICATION OF CONTRACT/ORDER NO. DE-SC0014664	10B. DATED (SEE ITEM 13) 03/10/2016

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers  is extended.  is not extended.  
Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods: (a) By completing Items 8 and 15, and returning \_\_\_\_\_ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGEMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

See Schedule

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
X	D. OTHER (Specify type of modification and authority) DEAR 970.5204-2 DOE Directives DEC 2000 & FAR 52.222-41 Service Contract Labor Standards MAY 2014

E. IMPORTANT: Contractor  is not.  is required to sign this document and return \_\_\_\_\_ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

Technical Services for Management of the Oak Ridge Institute for Science and Education. The purpose of this modification is to update and revise Section J - List of Attachments as follows:

A. Attachment D.2 - DOE Directives (List B) List of Applicable Directives. Contract Document Attachment D.2 - DOE Directives (List B) as amended in modification 0028 List of Applicable Directives is hereby deleted in its entirety, and the attached RCN ORAU-004, dated April 21, 2017 is hereby incorporated into the contract. (Pages 3 of 7)

B. Attachment E - U.S. Department of Labor Wage Determination is hereby modified to include U.S. Department of Labor Wage Determination No: 2017-0006, Revision No: 1. (Pages 1 of 7)  
Continued ...

Except as provided herein, all terms and conditions of the document referenced in Item 9 A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Kenneth Lowell Kimbrough	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA Signature on File (Signature of Contracting Officer)	16C. DATE SIGNED 06/14/2017

CONTINUATION SHEET

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
DE-SC0014664/0052

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NAME OF OFFEROR OR CONTRACTOR  
OAK RIDGE ASSOCIATED UNIVERSITIES, INCORPORATED

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	C. All other terms and conditions remain unchanged. Payment:				

Attachment D  
Baseline List of  
Required Compliance Documents  
List B - List of Applicable Directives

DOE Directives  
may be found at the following address:  
<http://www.directives.doe.gov/>

Required Compliance Document	Document Date	Title	Change Through	Notes and Comments
DOE O 130.1	09/29/1995	Budget Formulation		
DOE O 137.1A	08/30/1999	Plan for Operating in the Event of a Lapse in Appropriations		
DOE O 142.3A	10/14/2010	Unclassified Foreign Visits and Assignments Program		
DOE O 150.1A	03/31/2014	Continuity Programs		
DOE O 151.1D	08/11/2016	Comprehensive Emergency Management System		
DOE O 153.1	06/27/2007	Departmental Radiological Emergency Response Assets	Footnote (4)	
DOE O 200.1A	12/23/2008	Information Technology Management		
DOE M 200.1-1	03/10/1997	Telecommunications Security Manual (Official Use Only)		
DOE O 205.1B Administrative Change 2	03/11/2013	Department of Energy Cyber Security Program		
DOE O 206.1	01/16/2009	Department of Energy Privacy Program		
DOE O 206.2	02/19/2013	Identity, Credential, and Access Management (ICAM)		
DOE O 210.2A	04/08/2011	DOE Corporate Operating Experience Program		
<b>DOE O 221.1B</b>	<b>09/27/2016</b>	<b>Reporting Fraud, Waste and Abuse to the Office of Inspector General</b>		
DOE O 221.2A	02/25/2008	Cooperation with the Office of Inspector General		
DOE O 221.3	12/17/2001	Establishment of Management Decisions on Office of Inspector General Reports		
DOE O 225.1B	03/04/2011	Accident Investigations		
DOE O 227.1	08/30/2011	Independent Oversight Program		
DOE O 231.1B Administrative Change 1	11/28/2012	Environment, Safety and Health Reporting		
DOE O 232.2 Administrative Change 1	03/12/2014	Occurrence Reporting and Processing of Operations Information		
DOE O 241.1B Administrative Change 1	04/26/2015	Scientific and Technical Information Management		

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<b>DOE Directives may be found at the following address: <a href="http://www.directives.doe.gov/">http://www.directives.doe.gov/</a></b>				
DOE O 243.1B, Administrative Change 1	07/08/2013	Records Management Program		
Compliance Line: Implementation Plan, approved by DOE on 06/26/2012.				
DOE O 252.1A, Administrative Change 1	03/12/2013	Technical Standards Program		
DOE O 350.1, Change 5	09/30/2014	Contractor Human Resource Management Programs		
DOE O 410.2, Administrative Change 1	04/10/2014	Management of Nuclear Materials		
DOE O 412.1	04/20/1999	Work Authorization System		
DOE O 413.1B	10/28/2008	Internal Control Program		Footnote (4)
DOE O 413.3B Change 2	05/12/2016	Program and Project Management for the Acquisition of Capital Assets		
DOE O 414.1D Administrative 1	05/08/2013	Quality Assurance		ES&H-related Directive included in WSS. See Footnote (3).
DOE O 420.1C	12/04/2012	Facility Safety		ES&H-related Directive included in WSS. See Footnote (3).
DOE O 430.1B, Change 2	04/25/2011	Real Property Asset Management		
DOE O 435.1, Change 1	08/28/2001	Radioactive Waste Management		ES&H-related Directive included in WSS. See Footnote (3).
DOE M 435.1-1, Administrative Change 2	06/08/2011	Radioactive Waste Management Manual		ES&H-related Directive included in WSS. See Footnote (3).
DOE O 436.1	05/02/2011	Departmental Sustainability		
DOE M 440.1-1A	01/09/2006	DOE Explosives Safety Manual		ES&H-related Directives included in WSS. See Footnote (3).
DOE O 440.2C, Administrative Change 1	06/22/2011	Aviation Management and Safety		ES&H-related Directive included in WSS. See Footnote (1).
DOE O 442.1A	06/06/2001	Department of Energy Employee Concerns Program		
DOE O 442.2	07/29/2011	Differing Professional Opinions for Technical Issues Involving Environmental, Safety and Health Technical Concerns		
DOE O 443.1B	04/21/2016	Protection of Human Research Subjects		

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Administrative Change 1				
DOE P 450.7	08/02/2004	Department of Energy Environment, Safety and Health (ES&H) Goals		
DOE O 451.1B, Change 1	09/28/2001	National Environmental Policy Act Compliance Program		ES&H-related Directive included in WSS. See Footnote (3).
DOE O 452.7	05/14/2010	Protection of Use Control Vulnerabilities and Designs		
DOE O 458.1, Administrative Change 3	01/15/2013	Radiation Protection of the Public and the Environment		ES&H-related Directive included in WSS. See Footnote (3).
DOE O 460.1C	05/14/2010	Packaging and Transportation Safety		ES&H-related Directive included in WSS. See Footnote (1).
DOE O 460.2A	12/22/2004	Departmental Materials Transportation and Packaging Management		
DOE M 460.2-1A	06/04/2008	Radioactive Material Transportation Practices Manual for Use With DOE O 460.2A		Footnote (2).
DOE P 470.1A	12/29/2010	Safeguards and Security Program		
DOE O 470.3B	08/12/2008	Graded Security Protection (GSP) Policy		
DOE O 470.4B, Administrative Change 1	02/15/2013	Safeguards and Security Program		
DOE O 470.5	06/02/2014	Insider Threat Program		
DOE O 470.6	09/02/2015	Technical Security Program		
DOE O 471.1B	03/01/2010	Identification and Protection of Unclassified Controlled Nuclear Information		
DOE M 471.3-1, Administrative Change 1	01/13/2011	Manual for Identifying and Protecting Official Use Only Information		
DOE O 471.3, Administrative Change 1	01/13/2011	Identifying and Protecting Official Use Only Information		
DOE O 471.6, Administrative Change 1	11/23/2012	Information Security		
DOE O 472.2, Change 1	07/09/2014	Personnel Security		
DOE O 473.3A	03/23/2016	Protection Program Operations		
<b>DOE O 474.2, Change 4</b>	<b>09/13/2016</b>	<b>Nuclear Material Control and Accountability</b>		
DOE O 475.1	12/10/2004	Counterintelligence Program		

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<b>DOE Directives</b> <b>may be found at the following address:</b> <u><a href="http://www.directives.doe.gov/">http://www.directives.doe.gov/</a></u>				
DOE O 475.2B	10/03/2014	Identifying Classified Information		
DOE M 481.1-1A Change 1	09/28/2001	Reimbursable Work For Non-Federal Sponsors Process Manual		
DOE O 481.1B	09/28/2001	Work for Others (Non-Department of Energy Funded Work)		
DOE O 484.1, Administrative Change 2	06/30/2014	Reimbursable Work for the Department of Homeland Security		
DOE O 522.1	11/03/2004	Pricing of Departmental Materials and Services		
DOE O 534.1B	01/06/2003	Accounting		
DOE O 551.1D, Change 2	08/09/2016	Official Foreign Travel		
DOE M 573.1-1	07/12/2000	Mail Services User's Manual		
DOE O 580.1A	03/30/2012	Department of Energy Personal Property Management Program		
DOE 2340.1C	06/08/1992	Coordination of General Accounting Office Activities		

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Baseline List of  
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<b>Work Smart Standards (WSS) Sets may be found at the following address: <a href="http://www.ornl.gov/orise/wss.htm">http://www.ornl.gov/orise/wss.htm</a></b>				
Required Compliance Document	Approval Date	Title	Change # Approval Date	Notes and Comments
WSS Set 40	06/18/2014	Oak Ridge Institute for Science and Education (ORISE) Work Smart Standards Set		

**FOOTNOTES:**

- (1) This document is not directly applicable to the Contractor; it is included in the list of applicable documents because the Contractor must provide certain information or input to DOE in order for DOE to comply with requirements specified in the document.
- (2) The Contractor does not perform activities which fall within the scope of this directive at this time. If these activities are conducted at some future date, the requirements contained in this document will be applicable to the Contractor and programs to implement the requirements of this document will be established when and if such activities are to be initiated.
- (3) This document is ES&H-related and appears on the current Work Smart Standards Set. In a WSS Set, the document may be referenced in its entirety or only certain chapters, paragraphs, or sections.
- (4) The requirements of this document are applicable; however, specific additional clarification or guidance is required from DOE before such requirements can be implemented in full as indicated in written requests for direction from the Contractor.

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REGISTER OF WAGE DETERMINATIONS UNDER  
THE SERVICE CONTRACT ACT  
By direction of the Secretary of Labor

U.S. DEPARTMENT OF LABOR  
EMPLOYMENT STANDARDS ADMINISTRATION  
WAGE AND HOUR DIVISION  
WASHINGTON D.C. 20210

Daniel W. Simms  
Director

Division of  
Wage Determinations

Wage Determination No.: 2017-0006  
Revision No.: 1  
Date of Last Revision: 02/01/2017

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.20 for calendar year 2017 applies to all contracts subject to the Service Contract Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2017. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).

State: Georgia

Area: Georgia County of Cobb

\*\*Fringe Benefits Required Follow the Occupational Listing\*\*

OCCUPATION CODE - TITLE	FOOTNOTE	RATE
12305 - Radiologic Technologist		32.20
(not set) - Health Physics Technicians II		25.09
(not set) - Health Physics Technicians III		26.32
(not set) - Health Physics Technologist		38.96
(not set) - Senior Health Physics Technicians		32.20

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors, applies to all contracts subject to the Service Contract Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is the victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at [www.dol.gov/whd/govcontracts](http://www.dol.gov/whd/govcontracts).



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ALL OCCUPATIONS LISTED ABOVE RECEIVE THE FOLLOWING BENEFITS:

HEALTH & WELFARE: \$4.27 per hour or \$170.80 per week or \$740.13 per month

VACATION: 2 weeks paid vacation after 1 year of service with a contractor or successor; and 3 weeks after 8 years. Length of service includes the whole span of continuous service with the present contractor or successor, wherever employed, and with the predecessor contractors in the performance of similar work at the same Federal facility. (Reg. 29 CFR 4.173)

HOLIDAYS: A minimum of ten paid holidays per year: New Year's Day, Martin Luther King Jr.'s Birthday, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day. (A contractor may substitute for any of the named holidays another day off with pay in accordance with a plan communicated to the employees involved.) (See 29 CFR 4.174)

\*\* UNIFORM ALLOWANCE \*\*

If employees are required to wear uniforms in the performance of this contract (either by the terms of the Government contract, by the employer, by the state or local law, etc.), the cost of furnishing such uniforms and maintaining (by laundering or dry cleaning) such uniforms is an expense that may not be borne by an employee where such cost reduces the hourly rate below that required by the wage determination. The Department of Labor will accept payment in accordance with the following standards as compliance:

The contractor or subcontractor is required to furnish all employees with an adequate number of uniforms without cost or to reimburse employees for the actual cost of the uniforms. In addition, where uniform cleaning and maintenance is made the responsibility of the employee, all contractors and subcontractors subject to this wage determination shall (in the absence of a bona fide collective bargaining agreement providing for a different amount, or the furnishing of contrary affirmative proof as to the actual cost), reimburse all employees for such cleaning and maintenance at a rate of \$3.35 per week (or \$.67 cents per day). However, in those instances where the uniforms furnished are made of "wash and wear" materials, may be routinely washed and dried with other personal garments, and do not require any special treatment such as dry cleaning, daily washing, or commercial laundering in order to meet the cleanliness or appearance standards set by the terms of the Government contract, by the contractor, by law, or by the nature of the work, there is no requirement that employees be reimbursed for uniform maintenance costs.

\*\* SERVICE CONTRACT ACT DIRECTORY OF OCCUPATIONS \*\*

The duties of employees under job titles listed are those described in the "Service Contract Act Directory of Occupations", Fifth Edition (Revision 1), dated September 2015, unless otherwise indicated.

\*\* OCCUPATIONS NOT INCLUDED IN THE SCA DIRECTORY OF OCCUPATIONS \*\*

Health Physics Technicians II

Under general supervision, obtains competent and reliable measurements of radioactive materials in both the working environment and internal workplace. Performs instrument standardization, radiological analyses of samples, and uses instruments to make radioactive measurements. Record data on measurement, performs mathematical calculations as necessary, evaluates results, and compares with standards. May recommend protective equipment and controls to appropriate personnel working with sources of radiation. May respond to any Emergency Radiation Safety Incident as a member of Radiation Safety Organization.

Participate with supervision and/or research personnel in planning experiments/processes related to measurements of radioactive materials. May recommend to supervision plant areas to survey and provide feedback concerning schedule of activities planned.

Monitors radiation levels in the environment and internal workplace to determine potential radiation hazards. Collects and processes operational or general samples in specific work areas to determine contaminated levels. Performs radiation surveys and notifies Health Physics supervision when excessive contamination levels are detected and recommends necessary corrective measures to reduce contamination level to acceptable levels. Repeats survey either partially or completely to determine effectiveness of any corrective measure taken to ensure compliance with allowable limits.

Collects data using personnel monitoring instruments and radiation protection instruments for analysis and inclusion in summary reports. Organizes data, prepares records, and notes trends. Compiles and retains records concerning the calibration of personnel monitoring instruments. Reviews laboratory data for quality assurance purposes and reviews computerized personnel data. Prepare summary report listing findings for management review. Compiles and retains records concerning the calibration of personnel monitoring instruments, i.e., porker dosimeters and other radiation instruments.

Analyzes reports and documents related to specific phase of health physics programs to assure that job responsibilities are adequately covered. Reduces data to useful, presentable form, including tables and graphics.

Determines invalid functioning of processes and programs and suggests probable cause of problems. Determines that analytical results are within prescribed limits and/or determines the cause of variations outside the limits. Outline action plans for further analysis and/or resolution of problems. Conducts investigation of cause and effect for any sample exceeding the guides, standards, and limits. Provides health physics advice as needed. Provides timely feedback to supervision about technical problems, data trends, and equipment problems.

Participates in a limited capacity in the development and preparation of operating and standards for monitoring and sampling existing or modified controls and methods relating to radiological safety. May review, evaluate, and make recommendations on procedures that apply to group functions and responsibilities.

### Health Physics Technicians III

Under general supervision, obtains competent and reliable measurements of radioactive materials in both the working environment and internal workplace.

Performs instrument standardization, radiological analyses of samples, and uses instruments to make radioactive measurements. Records data on measurement, performs

mathematical calculations as necessary, evaluates results, and compares with standards. May recommend protective equipment and controls to appropriate personnel

working with sources of radiation. May respond to any Emergency Radiation Safety Incident as a member of Radiation Safety Organization.

Participate with supervision and/or research personnel in planning experiments/processes related to measurements of radioactive materials. May recommend to supervision plant areas to survey and provide feedback concerning schedule of activities planned.

Monitors radiation levels in the environment and internal workplace to determine potential radiation hazards. Collects and processes operational or general samples in specific work areas to determine contaminated levels. Performs radiation surveys

and notifies Health Physics supervision when excessive contamination levels are detected and recommends necessary corrective measures to reduce contamination level to acceptable levels. Converts data to correct radiological quantities and units. Repeats survey either partially or completely to determine effectiveness of any corrective measure taken to ensure compliance with allowable limits.

Collects data using personnel monitoring instruments and radiation protection instruments for analysis and inclusion in summary reports. Organizes data, prepares

records, and notes trends. Compiles and retains records concerning the calibration of personnel monitoring instrument, i.e., pockets dosimeters, and other radiation instruments. Prepares sample notices, records and maintains samples of demographic data. Reviews laboratory data for quality assurance purposes and reviews computerized personnel data. May prepare summary report listing findings for management review.

Analysis of data is limited to comparison of routine readings with pre-determined standards, and reporting those which exceed operational levels.

Determines invalid functioning of processes and programs and suggests probable cause of problems. Determines that analytical results are within prescribed limits and/or determines the cause of variations outside the limits. Outline action plans for further analysis and/or resolution of problems. Conducts investigation of cause and effect for any sample exceeding the guides, standards, and limits. Provides health physics advice as needed. Provides timely feedback to supervision about technical problems, data trends, and equipment problems.

#### Health Physics Technologist

Under limited supervision, performs monitoring of special projects, work area, and items leaving radiological area for control of exposures from internal and external sources. Recommends appropriate personnel monitoring devices, protective equipment, and working time for operators and research personnel working with sources of radiation. Observes processes; reads, records, evaluates, and reports data from radiation detection devices and samples. May assist in the training of less experience technicians. Participates in the planning phase of experiments. May serve as a member of the Emergency Radiation Safety Incident Team.

Participate considerably with supervision and /or research personnel in planning experiments related to measurements of radioactive materials. Recommend to supervision plant areas to survey and provide feedback concerning schedule of activities planned. Offers suggestions and ideas pertaining to experimental method and equipment used in performing study. Provides detailed information on individual responsibilities such as scheduling measurements or defining objectives.

Monitors radiation levels in the environment and internal workplace to determine potential radiation hazards. Performs radiation surveys and notifies Health Physics supervision when excessive contamination levels are detected and recommends necessary corrective measures to reduce contamination level to acceptable level. Repeats survey either partially or completely to determine effectiveness of any corrective measure taken to ensure compliance with allowable limits.

Collects data using personnel monitoring instruments and radiation protection instruments for analysis and inclusion summary reports. Organizes data, prepares records, and notes trends. Complies and retains records concerning the calibration of personnel monitoring instruments. Reviews laboratory data for quality assurance purposes and reviews computerized personnel data. Prepare summary report listing findings for management review. Complies and retains records concerning the calibration of personnel monitoring instruments, i.e., pocket dosimeters and other radiation instruments.

Analyzes reports and documents related to specific phase of health physics programs to assure that job responsibilities are adequately covered. Reduces data to a useful, presentable form, including tables and graphics.

Determines invalid functioning of processes and programs and suggests probable cause of problems. Determines that analytical results are within prescribed limits. Outlines action plans for further analysis and/or resolution of problems. Conducts investigation of cause and effect for any sample exceeding the guides, standards, and limits. Provides health physics advice as needed. Provides timely feedback to supervision about technical problems, data trends, and equipment problems.

Participates in a limited capacity in the development and preparation of operating and standards for monitoring and sampling existing or modified controls and methods relating to radiological safety. May review, evaluate, and make recommendations on procedures that apply to group functions and responsibilities.

#### Senior Health Physics Technicians

Under general supervision, performs monitoring of special projects, work area, and items leaving radiological area for control of exposures from internal and external sources. Recommends appropriate personnel monitoring devices, protective equipment, and working time for operators and research personnel working with sources of radiation. Observes processes; reads, records, evaluates, and reports data from radiation detection devices and samples. May assist in the training of less experienced technicians. Participates in the planning phase of experiments. May serve as a member of the Emergency Radiation Safety Incident team.

Participate with supervision and/or research personnel in planning experiments related to measurements of radioactive materials. Recommend to supervision plant areas to survey and provide feedback concerning schedule of activities planned. Offers suggestions and ideas pertaining to experimental method and equipment used in performing study. Provides detailed information on individual responsibilities such as scheduling measurements or defining objectives.

Monitors radiation levels in the environment and internal workplace to determine potential radiation hazards. Performs radiation surveys and notifies Health Physics supervision when excessive contamination levels are detected and recommends necessary corrective measures to reduce contamination level to acceptable levels. Repeats survey either partially or completely to determine effectiveness of any corrective measure taken to ensure compliance with allowable limits.

Collects data using personnel monitoring instruments and radiation protection instruments for analysis and inclusion in summary reports. Organizes data, prepares

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records, and notes trends. Compiles and retains records concerning the calibration of personnel monitoring instrument, i.e., pocket dosimeters, and other radiation instruments. Reviews laboratory data for quality assurance purposes and reviews computerized personnel data. Prepare summary report listing findings for management

review. Compiles and retains records concerning the calibration of personnel monitoring instruments, i.e., pocket dosimeters and other radiation instruments.

Analyzes reports and documents related to specific phase of health physics programs to assure that job responsibilities are adequately covered. Reduces data to a useful, presentable form, including tables and graphics.

Determines invalid functioning of processes and programs and suggests probable cause of problems. Determines that analytical results are within prescribed limits and/or determines the cause of variations outside the limits. Outline action plans for further analysis and/or resolution of problems. Conducts investigation of cause and effect for any sample exceeding the guides, standards, and limits. Provides health physics advice as needed. Provides timely feedback to supervision about technical problems, data trends, and equipment problems.

Participates in a limited capacity in the development and preparation of operating and standards for monitoring and sampling existing or modified controls and methods relating to radiological safety. May review, evaluate, and make recommendations on procedures that apply to group functions and responsibilities.